



Littelfuse Introduces 650V SiC Schottky Diodes with New Package Sizes, Current Ratings from 6A to 40A at APEC 2019

Ideal for enhancing efficiency, reliability and thermal management in power electronics applications

CHICAGO, March 19, 2019 — [Littelfuse, Inc.](#) today introduced two additions to its expanding line of second-generation, 650V, AEC-Q101-qualified silicon carbide (SiC) Schottky Diodes. Both series offer power electronics system designers a variety of performance advantages over traditional silicon-based devices, including negligible reverse recovery current, high surge capability, and a maximum operating junction temperature of 175°C. This makes them ideal for applications in which improved efficiency, reliability, and thermal management are desirable. The announcement was made in the Littelfuse booth (#253) at the Applied Power Electronics Conference & Exposition (APEC 2019) in Anaheim, California.

The LSIC2SD065DxxA Series SiC Schottky Diode is available with current ratings of 6A, 10A, or 16A in a TO-263-2L package; the LSIC2SD065ExxCCA Series SiC Schottky Diode is available with current ratings of 12A, 16A, 20A, or 40A in a TO-247-3L package.

These SiC Schottky Diodes dissipate less energy and can operate at higher junction temperatures than alternative solutions such as standard silicon bipolar power diodes. They also require smaller heat sinks and support a smaller system footprint than those solutions. These advantages offer end-users the benefits of more compact, energy-efficient systems, and a potential lower total cost of ownership.

Typical applications for the new 650V SiC Schottky Diodes include:

- Electric vehicle (EV) charging stations
- Buck/boost stages in DC-DC converters
- Free-wheeling diodes in inverter stages
- High-frequency output rectification
- Power factor correction (PFC)

“These additions to our fast-growing 650V SiC Schottky Diode family allow us to offer a broader selection of current ratings and package designs suitable for a wider range of applications,” said Christophe Warin, Littelfuse Silicon Carbide Product Marketing Manager. “These new SiC Schottky Diodes enable a variety of design optimization



opportunities, including increased power density, higher efficiency and potentially lower bill of materials costs.”

The new 650V SiC Schottky Diodes offer these key benefits:

- Available in TO-263-2L and TO-247-3L packages for greater design flexibility.
- AEC-Q101-qualified diodes exhibit exceptional performance in demanding applications.
- Suitable for high-frequency power switching.
- Safe operation and ease of paralleling for reduced stress on the opposing switch.
- Larger design margin and relaxed thermal management requirements due to 175°C maximum operating junction temperature.

Availability

LSIC2SD065DxxA Series SiC Schottky Diodes are available in TO-263-2L packaging and LSIC2SD065ExxCCA Series SiC Schottky Diodes are available in TO-247-3L packaging. Both in tape and reel format, with a minimum order quantity of 800 devices. Sample requests may be placed through authorized Littelfuse distributors worldwide. For a listing of Littelfuse distributors, please visit Littelfuse.com.